small base camps and procurement sites. Some low order ephemeral drainages with associated springheads and poorly drained interior settings may also be the location of transient camps and procurement sites. Generally, settlement along the major drainages is expected for all time periods. Use of interior locales is most likely during Woodland I times. Figure 4 shows the anticipated locations of prehistoric sites based on general predictive models and the more specific LANDSAT-based model.

Prior to and during the Phase I survey, previous archaeological planning studies (Custer, Jehle, Klatka, and Eveleigh 1984; Custer and Bachman 1986; Custer, Bachman, and Grettler 1986, 1987) were consulted to ascertain the presence of known archaeological cultural resources within the Proposed Right-of-Way. Historic maps and atlases (Penn Warrants and Surveys, various years; 1737 Map drawn by Eastburn, Figure 5; Rea and Price 1849, Figure 6; Pomeroy and Beers 1868, Figure 7; Baist 1893, Figure 8; Bausman 1941, Figure 9; and the USGS Topographic Survey (1953) 1970, Figure 10) were consulted for the locations of former standing structures which have now become archaeological sites. Current landowners and tenants were queried regarding any observations they may have made about cultural resources on their property. From these sources, possible locations of prehistoric and historic cultural resources were plotted and examined during the survey.

FIELD AND LAB METHODS

The Phase I archaeological field methods included a mixture of pedestrian survey and shovel test pits within and immediately

FIGURE 4

Predicted Prehistoric Site Locations

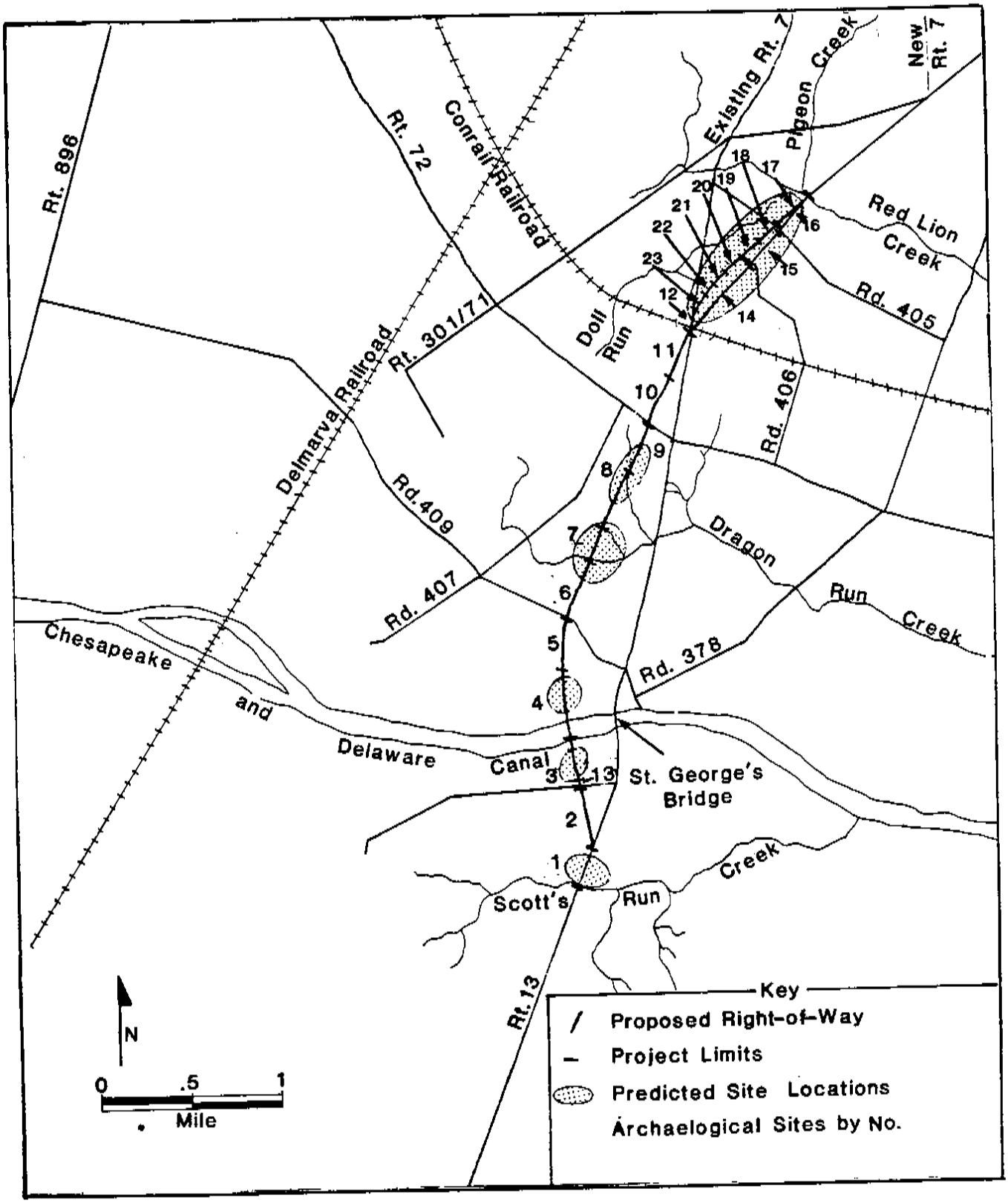
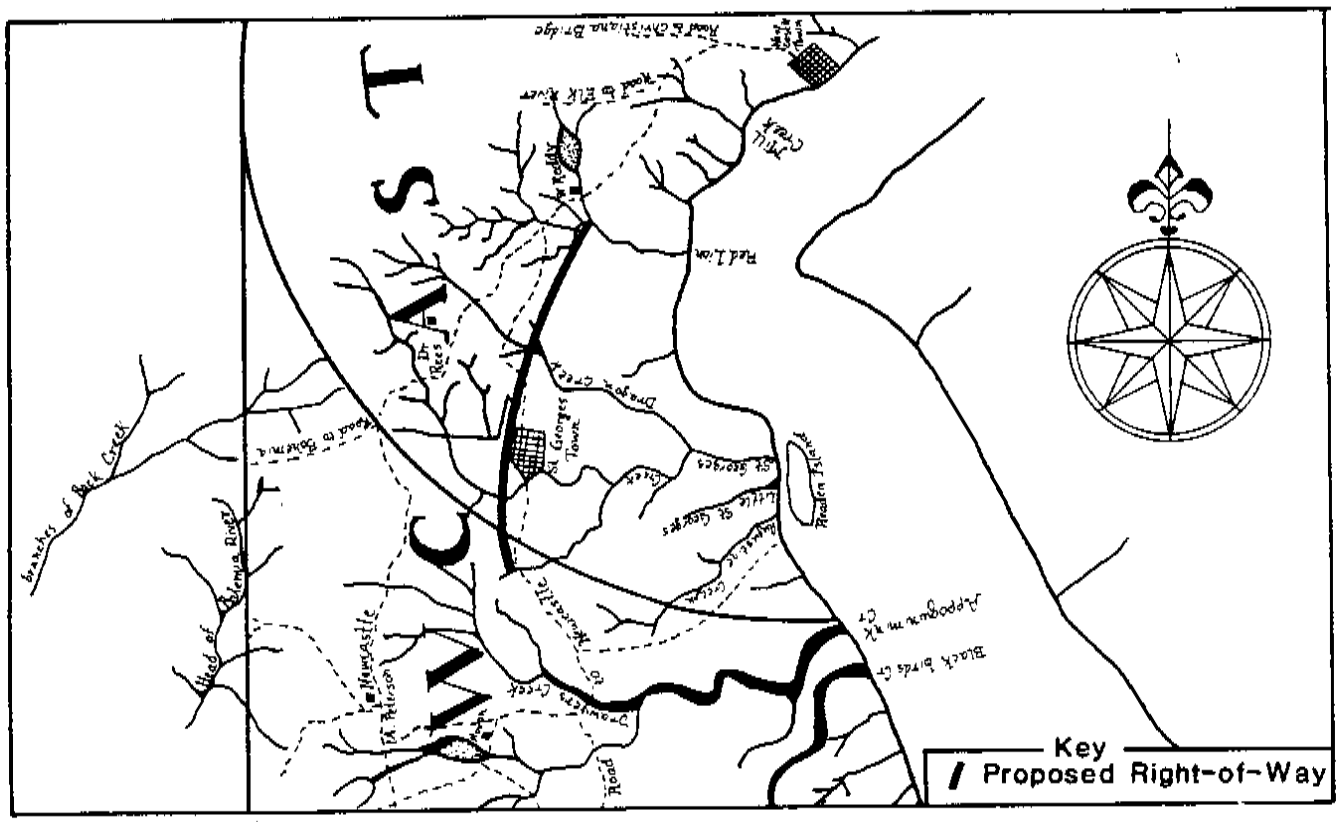


FIGURE 5

Detail of Eastburn's 1737 Map of Delaware for the Project Area



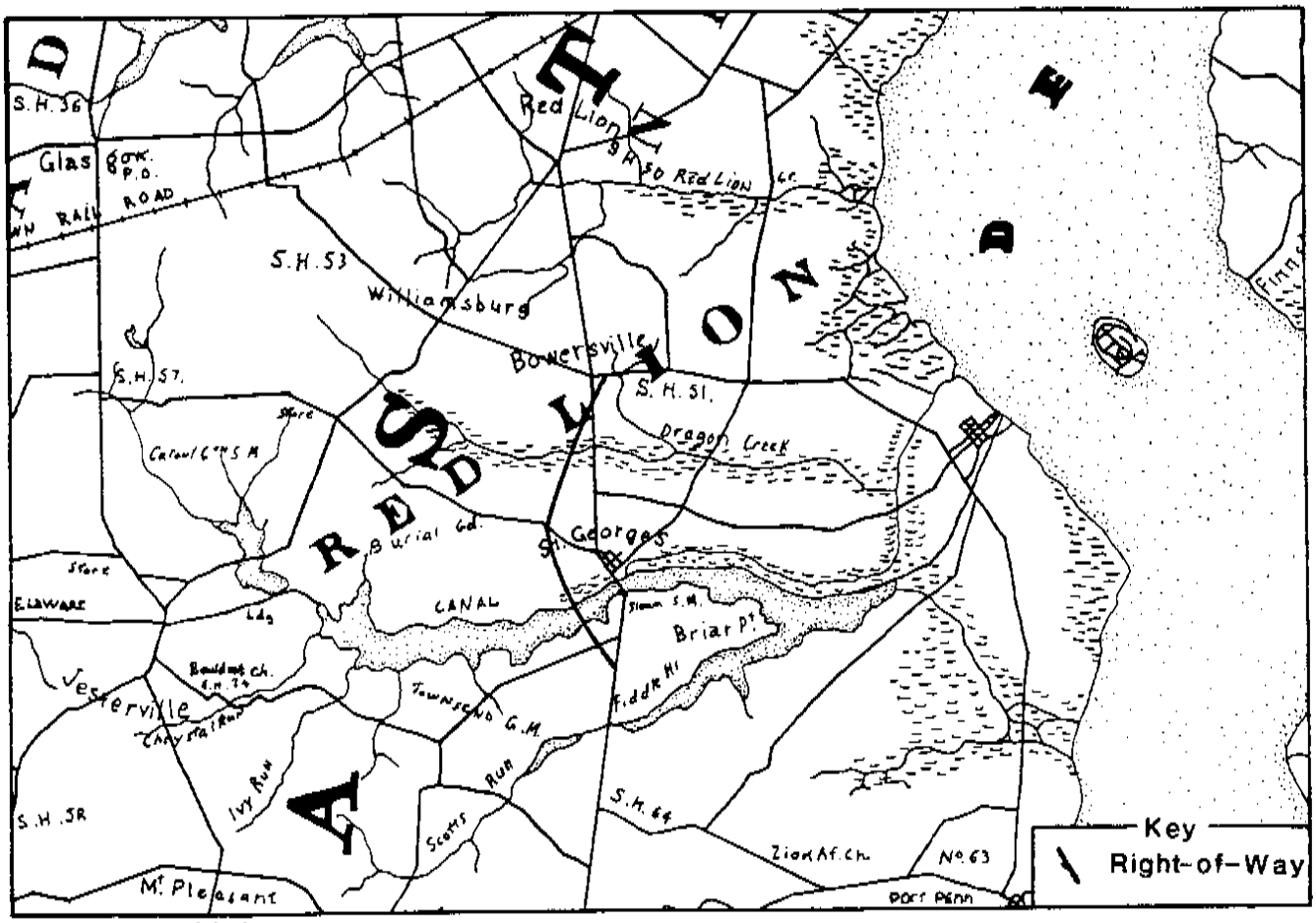
Redrawn from orignal

adjacent to the Proposed Right-of-Way, and were similar to the field methods employed during the Early Action Segment Survey (Bachman, Grettler, and Custer 1988). The entire length of the Chesapeake and Delaware Canal section of the Odessa segment was subjected to pedestrian survey, including the main trunk of the Proposed Right-of-Way, service roads, access ramps, and one toll booth location.

Surface visibility throughout the majority of the Proposed Right-of-Way ranged from approximately 50% visibility to more than 90% visibility in those areas where pedestrian surveys were conducted. The standard excavation procedure was to place shovel test pits at 40 foot intervals, in grid fashion, in those areas

FIGURE 6

Detail of Rea and Price's 1849 Map of New Castle County, Delaware from Original Surveys for the Project Area



Redrawn from original

within the Proposed Right-of-Way which were thought likely to produce cultural materials. Shovel test pits were placed along the centerline in some cases as well as at angles to and parallel with the centerline. Shovel test pit locations are shown in the parcel maps which follow.

Artifacts located on the surface during the pedestrian survey and in excavated shovel test pits were plotted on one-foot contour field maps (scale: 1 inch equals 100 feet) provided by the Division of Highways. For a complete list of all artifacts found during Phase I, see Appendix I. All shovel test pits were

FIGURE 7

Detail of Beer's 1868 Atlas of Delaware for the Project Area

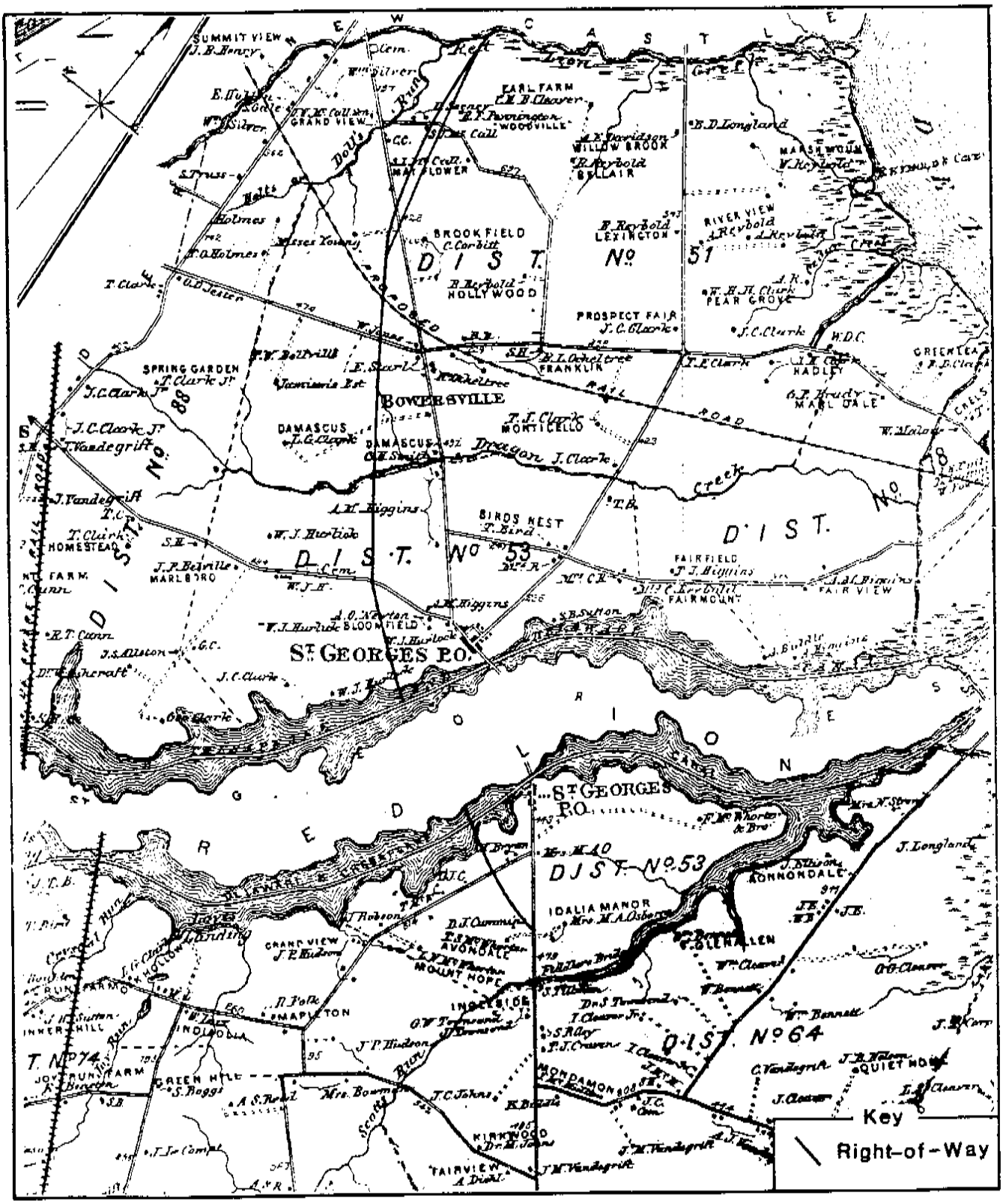


FIGURE 8

Detail of Baist's 1893 Atlas of the State of Delaware, New Castle County, for the Project Area

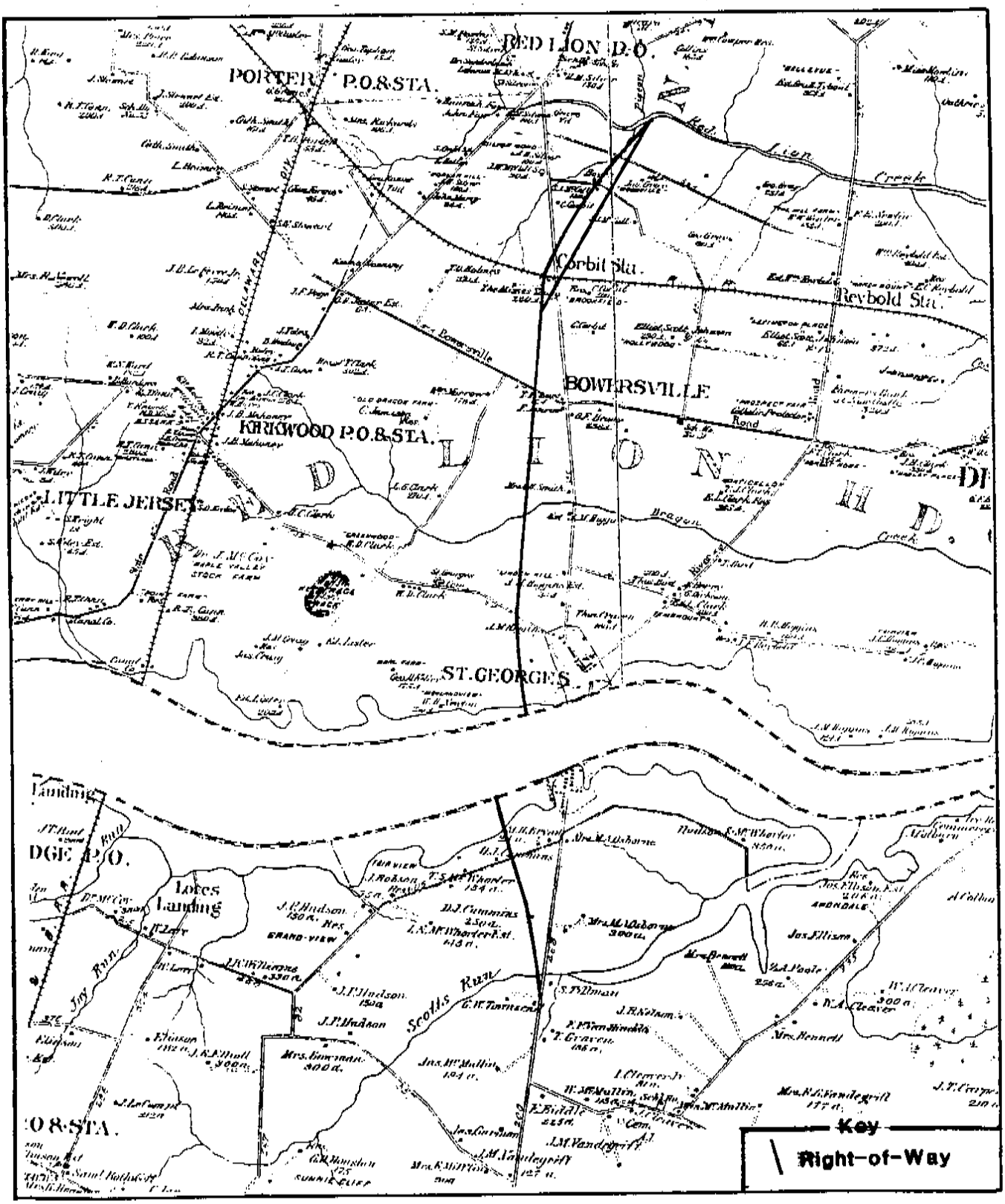


FIGURE 9

Detail of Bausman's 1941 Land Classification Map of New Castle County for the Project Area

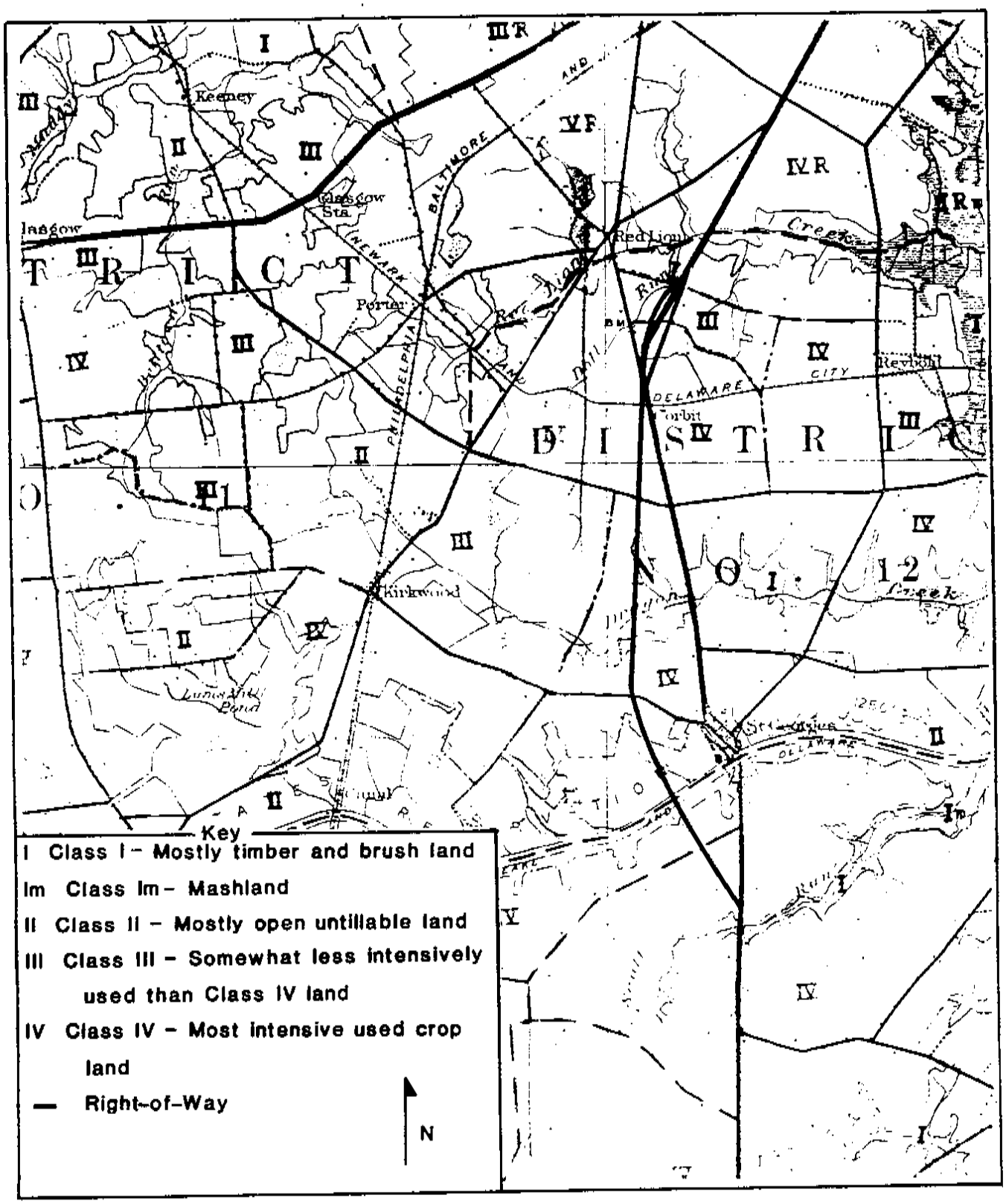
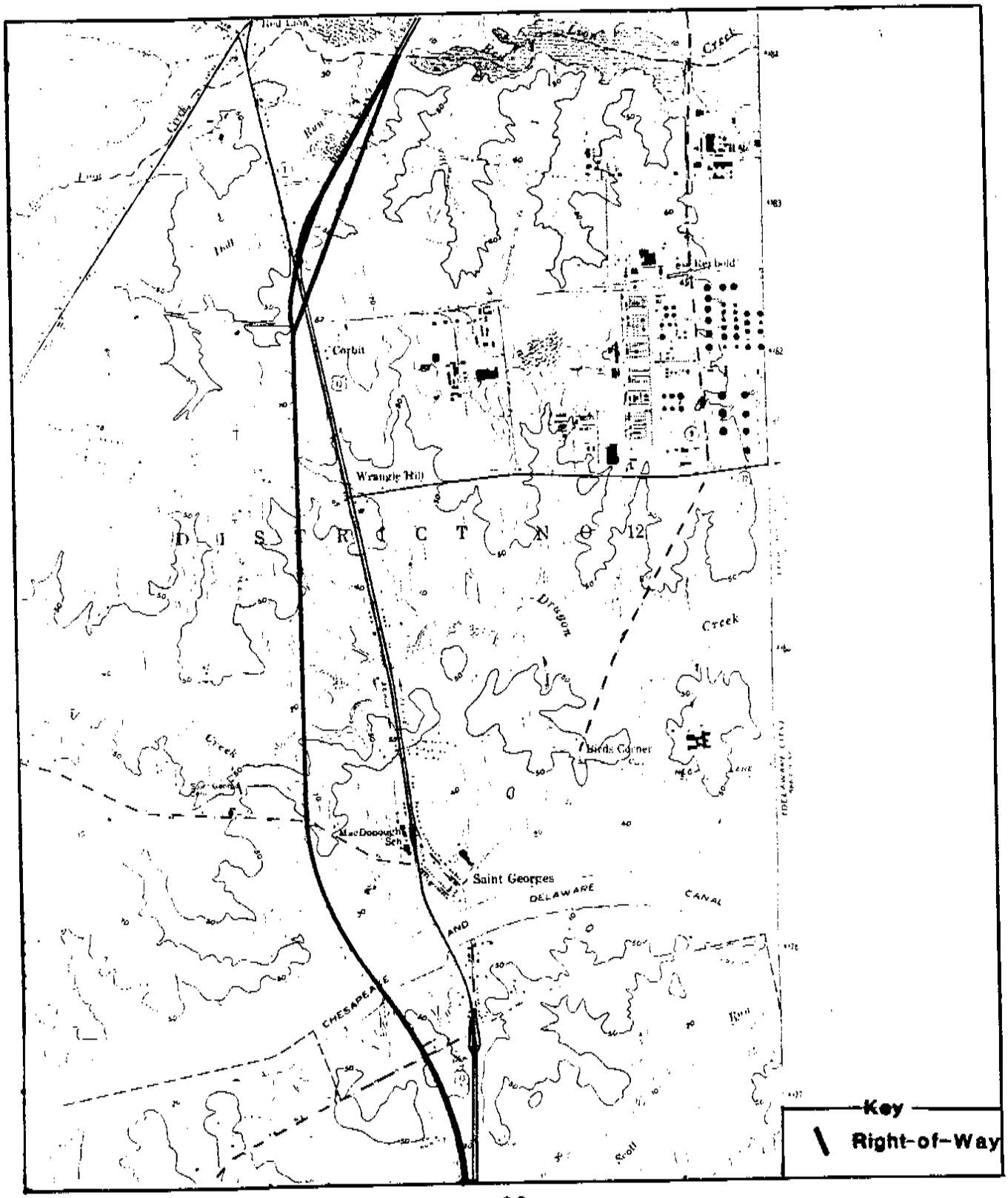


FIGURE 10

Detail of 1953 (1970) USGS Topographic Map for the Project Area



excavated to culturally sterile soil and all excavated soil was screened through 1/4" mesh. Stratigraphic soil data was recorded on standardized log sheets.

Although the station numbers on the highly accurate one-foot contour maps used in this survey were not keyed to the original Division of Highways Engineering Report's station numbers, careful distance measurements between these two maps allowed for accurate mapping of the archaeological data. Figures depicting the survey results reference the station numbers from the original engineering report where applicable.

Laboratory methods for the Phase I investigation included the washing, marking, and cataloging of all recovered artifacts according to standard archaeological practices.

PHASE I SURVEY RESULTS

The Proposed Right-of-Way consisted of two alignments. The first Proposed Alignment began at Scott's Run and moved west from existing Route 13 and then back to existing Route 13 at the intersection of existing Route 7 and Route 13. From there, the main trunk of the Proposed Right-of-Way had followed existing Route 13 to Red Lion Creek. After the initial Phase I survey was conducted, a shift in the Proposed Right-of-Way alignment moved the Proposed Right-of-Way east of existing Route 13 from the intersection of Route 7 and Route 13 to Red Lion Creek. Figure 11 illustrates the alignment shifts of the Proposed Right-of-Way.

The Proposed Right-of-Way was divided into arbitrary survey parcels to facilitate the testing program. Each parcel was given